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**Grass..**  
**the rancher's crop**

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# Grass



Grass is the world's most plentiful crop. Grasses, such as corn, wheat, rice, or sugarcane, supply us with a large part of our food. Forage grasses, both native and introduced, feed our livestock and many game animals. Grasses are great soilbuilders. They convert great stretches of marsh and tidal flats into productive meadowland in coastal areas. Because of grasses, we have the rich black soils of the prairies. Much of our most intensively cropped land was formerly natural grassland. Grasses protect the land from wind and water erosion. They bind the soil with fibrous roots. Grasses use water efficiently, compared to many other plants. They help stabilize water yields from watersheds and convert water to economic plant growth. Finally, grasses contribute immeasurably to our enjoyment. They beautify our homesteads, parks and other recreation areas, and the countryside. "All flesh is grass," Isaiah says in the Bible. Grass has not diminished in importance through the ages.

SOIL CONSERVATION SERVICE  
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## the Rancher's Crop

by J. S. McCorkle, *range conservationist, Soil Conservation Service*<sup>1</sup>

Animals either depend primarily on grass for their food or feed on grass-eating animals. Even microscopic organisms in the soil feed on grass roots. Because these organisms, together with the grass roots, decay and thus improve the soil, most grasses are more effective than any other type of plant in conditioning the soil for continued high production. Common cereal plants, such as corn and wheat, are members of the grass family that have been selected and bred for certain uses, such as seed production or forage. Some grasses are used for making fiber products. When all the uses of grass and its wide distribution are considered, the truth of John J. Ingalls' grass tribute is evident: "Should its harvest fail for a single season, famine would depopulate the earth."

<sup>1</sup> Mr. McCorkle is now retired.

In the United States nearly a billion acres, or a little over half of the total acreage, produces grass for grazing livestock and big-game animals.

### Grass Is Seeded by Nature and by Man

In much of the world, grass is a cultivated crop seeded by the labor of man. In the United States, nature had provided grass as the best plant for the vast rangeland. A great many acres of rangeland are not adapted to plowing and sowing of grass or any other crop, so the native grasses seeded by nature continue to be the principal crop. Introduced grasses are more common in the more humid East than in the West.

It is perhaps not strange that grass should sometimes be thought of as able to take care of itself



Should the grass harvest fail for a single season, famine would depopulate the earth.



Nature has provided grasses as the plants best adapted to our vast ranges.

under all conditions. Grass renews itself year after year; it endures the fluctuations of weather, from droughts to floods; and it usually survives the ravages of insects, rodents, and other pests.

## Grass Has Definite Needs for Growth

Although it is hardy, grass, like animals, must have food, air, water, and light to live and develop. It must have a plant body large enough to make leaves, stems, roots, and seeds. Thrifty plants and an abundant supply of plant nutrients are needed for a good forage crop.

The roots of the grass plant take in water and minerals, and its green tops take in air and light. From the water, minerals, and carbon dioxide in the air the green leaves manufacture the plant food and plant tissues from which the plant makes new growth in stems, leaves, roots, and seeds. Without sunlight, the leaves would not be able to manufacture food. Without leaves, the roots are helpless. The plant can draw on food stored in the roots to send up new leaves, but the roots cannot make the plant food for new growth.

Finally, the grass plant must have the opportunity to grow and develop when the soil, moisture, heat, and light are present in the right combination for growth.

## Grass Is the Background for Good Livestock

The rancher or livestock farmer thinks of himself principally as a producer of livestock. He has well-bred herds and some fine animals in which he takes a great deal of pride. He is also interested in and concerned with his grassland and the plants that grow on it, for he does not need to be told that his livestock depends on these plants for a livelihood. He recognizes the truth of the statement, "Take care



In much of the world, grass is seeded as a cultivated crop.



of the grass, and it will take care of the stock." To produce good livestock, he knows he must have good feed for them, which he can supply most easily and cheaply from good range.

Throughout the world's history, good grass-producing areas have been those that produced good livestock. England has some of the world's finest grassland—the main reason why that country has an enviable reputation for fine livestock. Sections of Argentina, Australia, and the United States are famous for livestock production because they have productive grassland.

Present operating conditions make ranching and livestock farming a highly competitive industry. Each acre of land and each forage plant must produce a good yield if the stockman is to prosper. It is important that the stockman know and recognize the needs and requirements of his plants.

### Grass Is Produced by Cooperating With Nature

The farmer studies the needs of his crop carefully. He tills the soil, seeds the crop, and adapts his harvesting methods to make the most efficient use of his equipment. He measures his crop in bushels or tons of crop harvested. The stockman, on the other hand, measures his crop in pounds of beef, lamb, and wool, because this is the measure of his market product. Although he has not thought much about grass production in tons, he is still directly concerned with the quantity of grass because he well knows it determines the pounds of meat



Grass is living and must have food, air, water, and light.



Grass endures winter snow and other extremes of weather.



The rancher takes pride in his well-bred herds and equal pride in the grass that produced them.



In the United States more than half the land, nearly a billion acres, produces grass for livestock.

he can produce. Unlike the farmer, he cannot plant his succeeding crop. He must work with nature for the seeding of the most productive pasture plants and those best adapted to the area.

Nature is a cheerful helper but a relentless foe. Before man came along, her way of keeping balance was hard and ruthless; drought, winter cold, disease, and predators regulated the grazing population. With these controls she was usually able to maintain the most productive plants and build up the soil. By studying the requirements of nature and using the range according to those requirements, the stockman can get good forage and produce a good turnout of meat and wool. At the same time, he keeps the basic resource—the soil—in good order.

Good judgment in adjusting grazing use to meet the raw forces of nature enables him to increase his yield of livestock products without destroying the grass.

### **Grass Production Can Be Increased by Man's Knowledge**

The rancher or livestock farmer, to harvest a good crop of livestock products, must know about the management of pasture plants and the soil in which they grow. He must know and understand what plants need for growth and survival. He must know the plants that grow well together and the ones that hold the soil and water and produce a high yield of forage. He must know when each plant species



Each acre must produce a good yield if the rancher is to prosper.



grows, when it seeds, and how and when new plants develop. He must know at what season each species is most valuable for forage, at what season each is grazed by animals, and how much grazing each will tolerate. Each plant species has different requirements, and each plant competes with other plants. The differences in the time of growth, type of root system, and amount and type of leaves are among the things that help plant species compete with each other.

The stockman can apply his knowledge of forage-plant development and adjust grazing so that the plants produce maximum forage. He must harvest his crop of forage grass at such a time and use it at such a rate that the desirable plants will stay vigorous and productive and will reseed themselves. The stockman who studies these things and applies his knowledge is the one who will stay in business and will prosper.

## Grass Helps Meet the Nation's Demand for Livestock Products

The modern rancher is no piker when it comes to producing food. Americans are eating more and more meat protein, and ranchers and other livestock producers are meeting the ever-increasing demand. Animals finished in feedlots were started on the rancher's grassland. Ranchers face an ever-growing challenge to help meet the protein need of a rapidly growing nation.

The country has entrusted to the rancher's care a sizable acreage of land. With this privilege to use the land goes the responsibility to take care of it and keep it productive. In doing this, the rancher must produce enough to make his own livelihood. The ranch or livestock farm that does not provide a satisfactory livelihood for the operator will not be given good care by him. Of course,



The stockman must know his grass, when it grows, when it is most useful, and how much grazing it will tolerate.



Good judgment enables the rancher to increase his yield without destroying the grass.

the statement is also true in reverse: The ranch that is not given good care cannot provide a good livelihood for the operator. A well-balanced livestock operation requires careful livestock husbandry; it



Grass goes to market on the hoof; the rancher measures his crop in pounds of beef and lamb.

requires equally careful management of the grass.

A stockman who wants help with ranch-management problems can get it from county agents or the SCS conservationist in his soil conservation district.







